DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-022123
Date Inspected: 21-Mar-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Fred Von Hoff

Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower Grillage

Summary of Items Observed:

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager was on site between the times noted above.

South Tower leg:

Pending repairs and further Ultrasonic Testing (UT) by QC personnel.

East Tower leg:

QC Inspector Mike Johnson informed this QA Inspector he had completed and accepted the Ultrasonic Testing (UT) of 25% on the weld length on each of the 10 Complete Joint Penetration (CJP) welds. QA Inspector verification was performed on approximately 20% of the weld length at each of the 10 CJP welds. QA Inspector Joe Lanz performed the UT verification for welds: TG-E-P9-P10, TG-E-P6-P10 and TG-E-P2-P3. This QA Inspector performed UT verification on the remaining CJP welds (TG-E-P4-P6, TG-E-P3-P4, TG-E-P1-P2, TG-E-P1-P5, TG-E-P5-P7, TG-E-P7-P8 and TG-E-P8-P9). See Ultrasonic Inspection Report (TL-6027) this date for further details. QA Inspector Joe Lanz informed this QA Inspector he did not observe any UT signal indicating a defect. This QA Inspector also did not observe any UT signal indicating a defect. This completes the QA verifications (visual, Magnetic Particle Testing and UT) for this tower leg.

West Tower leg:

QC Inspector Fred Von Hoff identified several areas on the Partial Joint Penetration (PJP) and Fillet welds that required additional welding (under fill). This QA Inspector randomly observed ABF welding personnel Todd Jackson (#4639) performing Shielded Metal Arc Welding (SMAW) at these various locations. This QA Inspector randomly observed as local preheating with a hand held gas torch was used to achieve the minimum preheat of 200°F, this was verified by using a temperature indicating marker.

North Tower leg:

This QA Inspector randomly observed ABF welding personnel Rick Clayborn (#2773) and Sal Sandoval (#2202) performing SMAW on various CJP welds. At the start of the shift 4 of the 10 CJP welds had previously been welded, by the end of the shift all but one CJP weld had been welded. This QA Inspector randomly observed during the shift the welding sequence appeared to have been altered, ABF welding foreman Frank Brajkovich informed this QA Inspector he had modified the sequence to allow adequate space to work for the two welding personnel.

North and South Suspender Brackets:

This QA Inspector had a conversation with Caltrans Engineer Saman Soheili regarding the distance of the hold back on the fillet welds attaching the top bearing plates. Caltrans Engineer Saman Soheili informed this QA Inspector he was looking into the numerical value for the amount of hold back and would notify this QA Inspector when it was determined.

This QA Inspector was informed by QC Inspector Fred Von Hoff the welding parameters for the personnel noted above were within the required heat input range in the Welding Procedure Specifications (WPS) ABF-WPS-D15-1162-4 for the PJP welds, ABF-WPS-D15-1042A-4 for CJP welds and ABF-WPS-D15-F1206 for Fillet welds. Note the welding parameters are the same for all three procedures. This QA Inspector randomly observed the amperages and voltages of ABF welding personnel noted above and they appeared to be within the ranges in the WPS. This QA Inspector observed that both 3.2 mm and 4.0 mm diameter E9018H4R electrodes were being used and stored in separate heated storage containers. This QA Inspector also observed the 1-hour exposure limit for the electrodes appeared to be monitored and adhered to.

This QA Inspector had previously received Weekly Welding Report submittal; ABF-Sub-001536 Rev-47. This QA Inspector performed a review of the documents to determine compliance with the Welding Quality Control Plan (WQCP) submitted by the contractor, compliance with the applicable contract requirements and to determine if any Quality Control (QC) documents were missing. This QA Inspector documented the findings on a weld specific tracking log and informed QA Inspector Bill Levell of the findings. This QA Inspector placed the reviewed documents in the applicable files.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above there were no notable conversations.

Comments

WELDING INSPECTION REPORT

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer